

Southwood T R E. Habitat, the templet for ecological strategies? Presidential Address to the British Ecological Society, 5 January 1977. *J. Anim. Ecol.* 46:337-65, 1977. [Department of Zoology and Applied Entomology, Imperial College, London and Silwood Park, Ascot, Berkshire, England]

The temporal and spatial scales of habitats need assessment in relation to these features in the organism being considered. Habitats may be arranged in a templet with two axes—disturbance and adversity. Life-history strategies are evolved by trade-offs determined by the position on the habitat templet. [The SCI® indicates that this paper has been cited in over 240 publications.]

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February 1, 1988

When one is asked to become president of a scientific society, it is easy to overlook the impending requirement to deliver an innovative review as a presidential address at some, then distant, date. But this time-honoured precedent was soon ominously close for me and thus, in 1976, I had to try to crystallise some ideas that I had about the relationship between life-history features and habitats.

The genesis of these ideas occurred early in my career. I have been interested in natural history for as long as I can remember and, since the age of about 10, have spent many hours collecting insects in the field. In 1948 (as a schoolboy) I worked for a few weeks as a "voluntary worker" with C.G. Johnson in the Entomology Department at Rothamsted Experimental Station; my first task was to assist in sorting the insects caught in traps flown from balloons. I soon noted that the relative abundance of different species found in the "upper

air" was different from what I was familiar with from my collecting activities. Johnson was most encouraging and jointly we published a short paper.<sup>1</sup> I continued to ponder the differences in flight activity between species and became convinced that habitat played a role. The challenge was to assemble data to test the idea; there were no precedents for quantitative comparative studies, but I prepared a paper<sup>2</sup> attempting this. Its publication was delayed for more than two years, and the more speculative correlations of migration with reproductive rate and other life-history features were removed by editorial dictate.

By 1976 attitudes to comparative studies had changed greatly; evolutionary interpretations of ecological information stalked the pages of many journals. I wished to develop the idea that the features of an organism's life history had been forged by evolution on the anvil of its habitat. The habitat matrix could be described by two axes, but the organism interacts with its habitat and may even modify it. So, rather than "template," associated with modern rigid moulds, the archaic "templet," used when moulds were often leather and flexible, was more appropriate.

The templet concept was intended to provide a framework for a sort of ecological "periodic table" in which the almost infinite variety of life-history features could be classified. In the pressure to conform to the presidential deadline, I overlooked a short paper by J.P. Grime<sup>3</sup> that classified the life-history strategies of flowering plants. Between the delivery of my address and its printing, a more detailed paper by Grime<sup>4</sup> was published. Our approaches have a great deal in common—this is yet another instance of parallelism in scientific developments. Several others, including P.J.M. Greenslade,<sup>5</sup> have developed these ideas, and at the very least they provide a useful framework for life-history theory.<sup>6</sup>

1. Johnson C G & Southwood T R E. Seasonal records in 1947 and 1948 of flying Hemiptera-Heteroptera, particularly *Lygus pratensis* L., caught in nets 50 ft. to 3,000 ft. above ground. *Proc. Roy. Entomol. Soc. London A* 24:128-30, 1949.
2. Southwood T R E. Migration of terrestrial arthropods in relation to habitat. *Biol. Rev.* 37:171-214, 1962. (Cited 240 times.)
3. Grime J P. Vegetation classification by reference to strategies. *Nature* 250:26-31, 1974. (Cited 75 times.)
4. ———. Evidence for the resistance of three primary strategies in plants and its relevance to ecological and evolutionary theory. *Amer. Naturalist* 111:1169-94, 1977. (Cited 240 times.)
5. Greenslade P J M. Adversity selection and the habitat templet. *Amer. Naturalist* 122:352-65, 1983. (Cited 100 times.)
6. Southwood T R E. Tactics, strategies and templets. *Oikos*. (In press.)